

THIRTY-SECOND  
ANNUAL REPORT  
OF THE  
*Sanitary Condition*  
OF THE  
SHELF URBAN DISTRICT  
FOR THE YEAR 1905.

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BY  
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MEDICAL OFFICER OF HEALTH.

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SHELF:  
J. H. WOODHEAD, BOOKSELLER AND STATIONER.  
—  
1906.



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# Medical Officer's Report.



SHELF, MARCH, 1906.

TO THE URBAN DISTRICT COUNCIL.

MR. CHAIRMAN AND GENTLEMEN,

I have pleasure in laying before you my Annual Report for the year 1905.

It is the Thirty-second Annual Report made for the District, and consists, as in past years of the various statistical tables issued by the Local Government Board, Home Office and County Council, with other matters concerning the Sanitary requirements of the district.

**Area of District and Population.**—The area of the district is 1,303 acres, exclusive of water, and I do not think there has been any change in the population since the census of 1901. So that all calculations have been based on a supposed population of 2,500.

**Births.**—The registered births during the year were 37, and consisted of 23 males and 14 females, giving a birth rate of 14·8 per thousand. This is far too low, worse even than last year, when the rate was 18·4 per thousand. If we compare it with the birth-rate for England and Wales, 27·2 per thousand, which by the way is the lowest ever recorded, one wonders what the causes are.

Large families are certainly less popular than they used to be. It seems to me that the cause, or probably causes, depends upon various factors. We do know that good trade, and prosperity raises the birth-rate.

Poor people say they cannot keep any more children, it takes them all their time to feed and clothe the few they have; that for the protection and welfare of the present, they cannot indulge in an increase for the future. But if, as we are being told, the working-classes were never so well off as now, why should they now dread large families when past generations welcomed them? I believe because in the past children were sent to the mills and pits when little more than infants. The larger the family, the greater the income—hence large families were popular. Now, children go to school till fourteen—a source of expense instead of revenue—often marrying at twenty. So it is little wonder at parents thinking “cui bono.”

It is gratifying to note that there were no cases of illegitimate births registered.

**Table A.—BIRTHS.**

Year.	Population Estimated to middle of year.	Number.	Rate per 1,000.
1896	2600	63	24·2
1897	2600	62	20·4
1898	2550	57	22·3
1899	2500	66	24·0
1900	2500	58	23·2
1901	2500	55	25·6
1902	2500	45	18·0
1903	2500	47	18·8
1904	2500	46	18·4
1905	2500	37	14·8

**Deaths.**—The deaths during the year numbered 33—14 males and 19 females; giving a death rate of 13·2 per 1,000. This compares favourably with the 16·8 of last year, and is lower than the death-rate of the smaller towns of England and Wales, which was 14·4 per 1,000.

**Table B.—DEATHS.**

Year.	Population Estimated to middle of year.	Number.	Rate per 1,000.
1896	2600	38	14·6
1897	2600	40	15·4
1898	2550	40	15·6
1899	2500	46	18·4
1900	2500	39	15·6
1901	2500	44	17·6
1902	2500	58	23·2
1903	2500	37	14·8
1904	2500	42	16·8
1905	2500	33	13·2

**Table B I.**

Mortality from all causes at subjoined ages for 1905.

	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 65.	65 and upw'ds.
1st Quart'r	1	1	...	1	3	4
2nd   ,,	...	1	1	...	2	6
3rd   ,,	1	...	...	1	3	2
4th   ,,	1	...	...	...	3	2
Total	...	3	2	1	2	11
						14

**Table B II.—Infantile Mortality Rate.**

Year.	Population Estimated to middle of year.	Total Deaths Registered at all ages.	Number under 1 year.	Rate per 1,000.
1896	2600	38	6	95·2
1897	2600	40	9	145·01
1898	2550	40	9	157·8
1899	2500	46	10	151·5
1900	2500	39	6	103·0
1901	2500	44	6	109·0
1902	2500	58	13	288·8
1903	2500	37	3	63·8
1904	2500	42	4	95·23
1905	2500	33	3	81·8

**Infantile Mortality.**—Only three children under 1 year of age died during the year, giving an infantile mortality rate of 81·8 per 1,000 registered births. It is gratifying to have this number kept down at such a reasonable figure. The same rate for England and Wales, exclusive of the large towns, was 113.

**Zymotic Death Rate.**—We had no deaths under this heading during the year.

**Scarlet Fever.**—Five cases were notified, none of which proved fatal.

**Measles.**—Four cases. No deaths.

**Whooping Cough.**—Very few cases, possibly owing to the small number of cases of measles. It is by no means uncommon to find whooping cough epidemic after measles.

**Diphtheria.**—No cases.

**Enteric Fever.**—One case. Recovery.

**Epidemic Influenza.**—Influenza was by no means severe. The cases were mild in type and did not run through whole households, as it has in past years.

**Phthisis.**—There were three deaths recorded under this heading.

**Cancer.**—The high death-rate for malignant disease was again kept up ; there being 3 deaths during the year.

**Pulmonary Diseases.**—There were six deaths due to pulmonary troubles.

**Inspections.**—These have been well attended to by your Inspector. I have personally visited such houses as required special attention.

**Nuisances** have received every attention.

**Excrement or Refuse Removal.**—The scavenging is done by contract. It is not absolutely satisfactory, but much better attended to than in past years—if one could only impress upon the contractors the necessity of regularity.

**Water.**—The greater part of the District is supplied with water from the Bradford Corporation through a local Company. It is a good drinking water, but occasionally becomes too soft, and has then a slight plumbo-solvent action.

The difficulty I mentioned in my last report between Halifax and Bradford over the supply to Lumbrook and Lower Shelf, has happily been settled after some delay, and those Districts, at the time of writing, will be well supplied with water from the Bradford reservoirs.

Riding Hill has already been supplied ; so that practically the whole District has an ample supply of good drinking water—an inestimable boon considering the straits they were put to in periods of long drought.

**Roads and Lighting.**—The high roads and bye roads have been well attended to, and will compare very favourably with most urban districts. The whole locality is well lit with

incandescent lamps. The streets are named and houses all numbered, a great help to the postmen and tradesmen, especially in a village where several families bear the same name.

**Hospital.**—Our arrangement with Halifax to take any of our zymotic cases has proved a great success. I feel personally obliged to them for the kind and courteous way in which we have always been met.

**Infectious Diseases Notification Act.**—The compulsory notification of infectious diseases was adopted and came into force in May 1896. In July 1898, measles was added, and has proved advantageous.

In 1900, phthisis was made voluntary, but has proved of very little benefit, as voluntary notification generally means no notification.

Chicken-pox might, with benefit, be included on the notifiable list.

**Bye-Laws.**—These were adopted on November 5th, 1901, and approved by the Local Government Board November 28th, 1901.

They seem ample for the present requirements.

**Vaccination.**—Probably owing to the Halifax Guardians enforcing the Vaccination Act, there has been a great increase in the number of vaccinations. People, I think, are beginning to find out that the bogey of vaccination is one entirely of their own making.

**Drainage.**—The sewage of the District is conducted into fields and streams, except in a few cases where cesspools are used. This, I am glad to say, will soon be a thing of the past, as they are already constructing the new sewage works for the Wood Fall Beck part of the scheme. This will deal with an estimated population of 1,800.

The Contract has been let for £3,515 10s. 0d., and is to be completed by the 31st of July. The rateable value of the district for the purpose of the last district rate was £8,449 5s. 0d.

I am again appending a short account of the present scheme, for which I am indebted to Mr. Drake.

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## **SHELF SEWAGE WORKS.**

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**District.**—The Shelf Urban District with a total area of 1303 acres, is divided into two distinct watersheds. The first includes Shelf Village and Shelf Moor, and drains naturally into the stream named Wood Fall Beck. The other watershed includes the hamlets of Stone Chair, Lower Shelf and Lumbrook, and drains into the stream named Lumbrook.

**1. Population.**—The scheme as passed by the Local Government Board deals only with the first of the above mentioned watersheds, and drains an area of 478 acres or thereabouts, with a total population of 1,800, leaving out only four houses, which it is impossible to drain on account of their isolation.

**2. Daily Flow.**—For the purposes of this scheme, we have assumed the daily dry weather flow at 10 gallons per head for 1,800—18,000 gallons per day, although we find from the Water Company's books that the total number of 542 houses (out of 656) connected have a consumption of only 5 gallons per head per day.

In this scheme it is not proposed to admit rain water from roads or trade effluents.

**3. Existing Arrangements.**—The district is at present drained by dry walled drains, with the exception of pipes at Shelf Moor. These drains all discharge direct into the streams. In the present scheme all the sewers are intended to be ventilated by means of the manholes and lamp-holes.

**4. Ventilating Flushing.**—At the heads of all lines of sewers it is intended to fix flushing doors. The gradients

throughout are quick, varying from 1 in 209, to 1 in 12, but averaging 1 in 80.

The effluent is conducted to the Disposal Works by two main outfalls, and known as Riding Hill and Brow Lane outfalls.

These two outfalls are collected in to one pit at the Disposal Works, at a level of 716' .50 O.D., but before entering this pit they pass through automatic leaping wier storm overflows, which divert all over 6 volumes direct to the stream, without further treatment.

**5. Disposal Works.**—From the collecting pit, the effluent passes through sand tanks (in duplicate) each 6 feet by 3 feet 6 inches by 3 feet deep, provided with screening grates, &c., thence through a channel to the Receiving Tank, first passing another automatic storm overflow, where all over two volumes are diverted, thus allowing for twice the daily dry weather flow (36,000 gallons) to have full treatment. The four volumes of effluent diverted at this "overflow" are conducted to storm Filters (in duplicate) each 12 yards by 6 yards by 1 yard deep (charged with clinkers, slag or other suitable medium), and which have a combined area of 144 yards superficial, and allowing 500 gallons per superficial yard per 24 hours=72,000 gallons or four times the dry weather flow.

The Receiving Tank is 24 feet by 20 feet by 6 feet deep and has a total capacity of 18,000 gallons, or one day's dry weather flow.

It is divided by a centre wall, so that one half can be sludged whilst the other half is working. For this purpose two sludge areas are provided each 6 yards by 4 yards.

Coping level of Tank	...	...	716' 00	O.D.
"	"	Water	...	715' 00
"	"	Bottom	...	709' 00
"	"	Discharge	...	711' 00

From the Receiving Tank, the effluent is conducted through 5 in. iron pipes to No. 4 circular filters built of pigeon-holed brick walls.

Each of these filters is 26 feet in diameter and 6 feet deep, and suitable medium. The total capacity of these filters is 472 cube yards, and allowing for 168·7 gallons per cube yard per 24 hours=79,628 gallons (double dry weather flow=36,000 galls.)

Surface level of Filters, 709' 00 O.D. and 689' 75.

Discharge „ „ „ 703' 00 „ „ 681' 75.

The effluent is distributed on to the above filters by patent automatic revolving distributors.

From the Filters, the effluent is conducted on to irrigation areas 12 in number, by means of pipe carriers, the areas are level underdug 12in. deep, soil 12in. deep and banks 18in. high and are underdrained by 4in. land tiles in lines 20 feet apart or thereabouts.

The filtered effluent is collected into a discharge pit (lined with white glazed tiles for purposes of inspection) and from there discharged into the stream. Level of pit 622' 00 O.D.

**6. Areas.**—The total area of site is 1a. 3r. 36p.

The nature of the sub-soil (ascertained by digging try holes on the site) is clay of a somewhat impervious nature, as is practically all the land in this neighbourhood.

## **FACTORY AND WORKSHOP ACT.**

There are three mills in the District, one of which is divided into three factories. They together give employment to about eight hundred hands.

The spinning of yarns and manufacturing of cloth is the chief trade carried on in the District.

The general condition of these factories is good. They are well ventilated and clean. Lime-washing is well done, and there is ample air space per worker—with efficient means of escape in the event of fire.

The closet arrangements have not been quite satisfactory, but are much better than they were. The number has been increased and a distinction made for the sexes.

Chloride of lime, used frequently, has been the disinfectant.

I hope later that all the factories will be supplied with water closets.

**Lumbrook Mill** is an old mill, situate at the border of Shelf, Northowram, and Hipperholme. It manufactures cloths, employing about two hundred hands, many of them being residents outside the District.

The general cleanliness and attention to sanitary requirements is good.

It is fitted with outside iron fire escapes.

**New Mill or Clough Mill** is a modern stone-built mill, in every way up-to-date. It employs short of 250 hands in the spinning and manufacture of woollens. It is in a high state of sanitary efficiency, well ventilated, well lighted, and spotlessly clean.

The closet arrangements are not perfect, but can be made more so when the sewerage scheme is finished.

**Shelf Mills** are a large irregular block of stone buildings divided into three factories, under three different firms.

The largest, employing about 240 hands, is a spinning mill.

The other two firms employ about 50 hands each, chiefly in manufacturing.

The sanitary arrangements are good.

These factories, like the others, are supplied, in addition to their own water, with water from the Bradford mains.

The **Workshops** in the District are as follows:—Dress-makers, 2; Milliner, 1; Wheelwright, 1; Bootmakers, 2; Shoeing-smiths, 2; Tailors, 2; Steam Laundry and Tannery.

The general condition is satisfactory.

**Bake-houses** (1).—Satisfactory.

**Slaughter-houses** (2).—Satisfactory.

**D.C.M. Order.**—For some years now there has been a gradual improvement in the cowsheds and mistals.

A register is kept of cowkeepers.

I have the honour, gentlemen, to be

Your obedient servant,

W. ROSETHERNE THOMPSON,

Medical Officer of Health.



**Table I.—FOR WHOLE DISTRICT.**

Year.	Population estimated to Middle of each Year.	Births.		DEATHS UNDER ONE YEAR OF AGE.		TOTAL DEATHS AT ALL AGES.		Deaths in Public Institutions beyond District.	NETT DEATHS AT ALL AGES.	Rate.
		Number	Rate.	Number	Rate per 1,000 Births registered.	Number	Rate.			
1895	2650	49	18·4	7	142·8	52	19·6	...	52	19·6
1896	2600	63	24·2	6	95·2	38	14·6	...	38	14·2
1897	2600	62	20·4	9	145·01	40	15·4	...	40	15·3
1898	2550	57	22·3	9	157·8	40	15·6	...	40	16·6
1899	2500	66	24·0	10	151·5	46	18·4	...	46	18·4
1900	2500	58	23·2	6	103·0	39	15·6	...	39	15·6
1901	2500	55	25·6	6	109·0	44	17·6	1	45	18·4
1902	2500	45	18·0	13	288·8	58	23·2	...	58	23·2
1903	2500	47	18·0	3	63·8	37	14·8	2	39	15·6
1904	2500	46	18·4	4	95·23	42	16·8	2	44	17·6
Averages for years 1895-1904.	2540	54·8	21·25	7·3	134·86	43·6	17·16	.5	44·1	17·45
1905	2500	37	14·8	3	81·08	33	13·2	2	35	14·0

Area of District in acres (exclusive of area covered by water) ... 1303.

Total population at all ages ... ... ... 2500  
Number of inhabited houses ... ... ... 700  
Average number of persons per house ... ... ... 3·9

At Census of 1901.

**Table II.—For Whole District.**

Year.	Population estimated to Middle of each Year.	Births registered.	Deaths at all ages.	Deaths under one Year.
1895	2650	49	52	7
1896	2600	63	38	6
1897	2600	62	40	9
1898	2550	57	40	9
1899	2500	66	46	10
1900	2500	58	39	6
1901	2500	55	44	6
1902	2500	45	58	13
1903	2500	47	37	3
1904	2500	46	42	4
Averages of years 1895 to 1904	2540	54.8	43.6	7.3
1905	2500	37	35	3

**Table III.—For Whole District.**

CASES OF INFECTIOUS DISEASES NOTIFIED  
DURING THE YEAR 1905.

NOTIFIABLE DISEASES.	At all Ages.	AT AGES.—YEARS.		
		1 to 5.	5 to 15.	25 to 65.
Scarlet Fever ... ...	5	...	5	...
Enteric Fever ... ...	1	...	...	1
Measles ... ...	4	4	...	...
Totals ... ...	10	4	5	1

*Isolation Hospital* :—Halifax Fever Hospital.

*Table IV.—FOR WHOLE DISTRICT.**CAUSES OF, AND AGES AT DEATH DURING YEAR 1905.*

CAUSES OF DEATH.	DEATHS AT SUBJOINED AGES.				
	All Ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.
Enteritis	...	...	...	...	...
Phthisis	...	...	...	...	...
Cancer	...	...	...	...	...
Bronchitis	..	...	...	...	...
Pneumonia	...	...	...	...	...
Other Diseases of Respiratory Organs	...	...	...	...	...
Alcoholism	...	...	...	...	...
Cirrhosis of liver	...	...	...	...	...
Premature Birth	...	...	...	...	...
Heart Diseases	...	...	...	...	...
Accidents	...	...	...	...	...
Suicides	...	...	...	...	...
Apoplex	...	...	...	...	...
Convulsions	...	...	...	...	...
All other causes	...	...	...	...	...
All causes	...	...	...	...	...

## Table V.—For Whole District.

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### **INFANTILE MORTALITY DURING YEAR 1905.**

CAUSE OF DEATH.	Under 1 Week.	6-7 Months.	Total Deaths under 1 Year.
Premature Birth ... ...	1	...	...
Congenital Defects ...	1	...	...
Convulsions ... ...	...	1	...
All Causes.—Certified ...	2	1	3

Births in the Year.—Legitimate, 37.

Deaths from all Causes at all Ages, 38.

Population (estimated to middle of 1905, 2,500.

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## **SHELF URBAN SANITARY DISTRICT.**

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Medical Officer of Health :—W. ROSETHERNE THOMPSON.

Sanitary Inspector :—W. RILEY.

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WATER SUPPLY—Quality, *good*.

Action on Lead—*Slight*.

Any extensions or change during 1905—*Lower Shelf and Lumbrook*.

Any inadequacy in any part?—*No*.

SEWERAGE—Is the district systematically sewered?—*No*.

Extensions or improvements during 1905—*The Sewerage works are now being constructed.*

SCAVENGING—Are the privy-middens, ash-places, etc.,  
cleansed by Sanitary Staff, by Contractors, or by  
Owners and Tenants? } By Contractors.

Any inadequacy of scavenging?—*No*.

ADOPTIVE ACTS—Acts adopted during 1905 (or parts)—*None*.

Any disease added to Notification schedule { *Measles and Phthisis*  
*e.g.*, Measles, Chicken-Pox, &c. } *already included.*

Any system of voluntary notification of Phthisis? { *Yes, but rarely*  
*reported.*

BYE-LAWS—Any adopted or sanctioned during 1905?

- (a) Under the Public Health Act, 1875—*Adopted No. 5th, 1900.*
- (b) Under the Public Health Acts (Amendment) 1890—*No.*

Regulated Buildings, Trades, &c.	No. in District.	No. on Register.	Total No. of Inspections made.	General Condition?	Legal Proceedings (if any).
Slaughter Houses	3	3	3	Fairly good	
Cowsheds ... ...	32	31	25	Better than they were	
Offensive Trades..	1	1	6	Good	<i>None.</i>

#### COWSHEDS—

- Give date of Regulations in force under D.C.M. Order—*July 14th, 1887.*
- Any special inspection made during 1905—*No.*
- Any systematic veterinary inspections of Cows—*No.*
- Any action taken by outside Authorities, e.g., under 'Milk Clauses' concerning milk supplied from this district? } *No.*

#### INFECTIOUS DISEASE—

- What disinfecting apparatus is available—*Formaline Spray.*
- How are the dwellings disinfected?—*Fumigated.*
- Any placards or handbills issued during 1905—*No.*

SCHOOLS—Number closed during 1905 on account of sickness—*None.*

- Any ailment or contagious disease associated particularly with school life during 1905? } *No.*

#### FACTORY AND WORKSHOP ACT—

- Any cases of anthrax in factories or workshops during 1905—*No.*

#### MIDWIVES ACT, 1902—

- Number of cases of Puerperal Fever occurring in the practice of Midwives } *None.*
- Number of such Midwives disinfected by Sanitary Authority under Rule E. 5 of the Central Midwives Board } *None.*

DWELLINGS—Number of Houses built during 1905—*None.*

- Any occupied houses unfit for habitation?—*No.*
- Any overcrowding of persons in houses?—*No.*
- Any action taken under the Housing of the Working Classes Acts? } *No.*
- Is house-to-house inspection systematically made?—*No.*
- Are records kept?—*Yes.*

#### NUISANCES—

- Total Number of Nuisances in hand at close of 1904—5.
- At close of 1905—3.

Reported during 1905—**21.**

Abated during 1905—**21.**

Number of Sink wastes disconnected during 1905—**12.**

Number of Sink wastes trapped during 1905—**12.**

Number of Closets newly constructed during 1905—**9.**

Kinds—*Privy and Covered Ashpit.*

Number of Closets reconstructed during 1905—**6.**

Kinds—*Privy and Covered Ashpit.*

#### WHAT ACTION HAS BEEN TAKEN IN REGARD TO THE FOLLOWING MATTERS ?

Samples under Sale of Food and Drugs Acts—**2.**

Has there been any poisoning during 1905 attributable to	{ Arsenical beer ?—No. Ptomaines ?—No. Lead-contaminated water ?— <i>One or two suspicious cases, but only slight.</i>
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Burial Grounds—Number in district—**4.**

Any need for (a) extension ?—No ; (b) closure ?—No.

BIRTHS—*Males 23 ; Females 14. Total 37.*

Number illegitimate, included in above—*None.*

Number of Still Births (not included)—*None.*

DEATHS during 1905—(1) Gross Deaths, i.e., Total actually registered  
in the district, without any correction } **33.**

(2) Nett Deaths, on which the rates are calculated—  
*Males 14 ; Females 19.*

Number uncertified, included in the above—**2.**

## **Factories, Workshops, Laundries, Workplaces and Homework.**

### 1. INSPECTION—INCLUDING INSPECTIONS MADE BY SANITARY INSPECTORS OR INSPECTORS OF NUISANCES—

Factories (including Factory Laundries)—Inspections, **4** ; Written Notices, **1.**

Workshops (including Workshop Laundries)—Inspections, **6.**

Total—Inspections, **10** ; Written Notices, **1.**

### 2. DEFECTS FOUND—Sanitary Accommodation, not separate for sexes— Found, **1** ; Remedied, **1.**

TOTAL NUMBER OF WORKSHOPS ON REGISTER—**10.**

